SANTA CRUZ BIOTECHNOLOGY, INC.

RBBP9 siRNA (h): sc-76361

BACKGROUND

RBBP9 (retinoblastoma-binding protein 9), also known as BOG or RBBP10, is a 186 amino acid protein that localizes to both the nucleus and the cytoplasm. Expressed in a variety of tissues with higher expression in cancer cells, RBBP9 function as a retinoblastoma (Rb) binding protein that is thought to play a role in cell proliferation and differentiation events. Specifically, RBBP9 interacts with Rb and provides cellular resistance to the growth-inhibitory effects of TGFβ1, thus facilitating the cellular transformation process. Due to its high expression level in cancer cells, RBBP9 may play a role in carcinogenesis and tumor formation. Two isoforms of RBBP9 exist due to alternative splicing events.

REFERENCES

1. Yokota, J., et al. 1988. Altered expression of the retinoblastoma (RB) gene in small-cell carcinoma of the lung. Oncogene 3: 471-475.
2. Cheng, J., et al. 1990. Homozygous deletion of the retinoblastoma gene in an acute lymphoblastic leukemia (T) cell line. Blood 75: 730-735.
3. Woitach, J.T., et al. 1998. A retinoblastoma-binding protein that affects cell-cycle control and confers transforming ability. Nat. Genet. 19: 371-374.
4. Woitach, J.T., et al. 1999. Assignment of the Bog gene (RBBP9) to syntenic regions of mouse chromosome 2G1-H1 and human chromosome 20p11.2 by fluorescence *in situ* hybridization. Cytogenet. Cell Genet. 85: 252-253.
5. Chen, J.Z., et al. 2002. Cloning and expression of a novel retinoblastoma binding protein cDNA, RBBP10. Biochem. Genet. 40: 273-282.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602908. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Cassie, S., et al. 2006. Novel retinoblastoma binding protein RBBP9 modulates sex-specific radiation responses *in vivo*. Carcinogenesis 27: 465-474.

CHROMOSOMAL LOCATION

Genetic locus: RBBP9 (human) mapping to 20p11.23.

PRODUCT

RBBP9 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RBBP9 shRNA Plasmid (h): sc-76361-SH and RBBP9 shRNA (h) Lentiviral Particles: sc-76361-V as alternate gene silencing products.

For independent verification of RBBP9 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76361A, sc-76361B and sc-76361C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

RBBP9 siRNA (h) is recommended for the inhibition of RBBP9 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

RBBP9 (2E5): sc-101111 is recommended as a control antibody for monitoring of RBBP9 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RBBP9 gene expression knockdown using RT-PCR Primer: RBBP9 (h)-PR: sc-76361-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.